[redacted]

August 11, 2006

Mr. Roger Cochrane, General Manager
BWX Technologies, Inc.
P.O. Box 785
Lynchburg, VA 24505-0785

SUBJECT: INSPECTION REPORT 70-27/2006-204 AND NOTICE OF VIOLATION

Dear Mr. Cochrane:

The U.S. Nuclear Regulatory Commission (NRC) conducted a routine announced nuclear criticality safety (NCS) inspection at your facility in Lynchburg, Virginia, from July 10 through 13, 2006. The purpose of the inspection was to determine whether activities involving special nuclear material were conducted safely and in accordance with NRC regulatory requirements. An exit meeting was held at the conclusion of the inspection on July 13, 2006. Throughout the inspection, observations were discussed with your managers and staff.

The inspection, which is described in the enclosure, focused on the most hazardous activities and plant conditions; the most important controls relied on for safety and their analytical basis; and the principal management measures for ensuring controls are capable, available, and reliable to perform their function relied on for safety. The inspection consisted of analytical basis review, selective review of related procedures and records, examinations of relevant NCS-related equipment, interviews with NCS engineers and plant personnel, and facility walkdowns to observe plant conditions and activities related to safety basis assumptions and NCS controls.

Based on the results of the inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The current Enforcement Policy is included on the NRC's web site at www.nrc.gov; select What We Do, Enforcement, then Enforcement Policy. The violation is being cited in the enclosed Notice of Violation (Notice) as a Severity Level IV violation, and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because it was identified by the NRC during the inspection. The violation being cited as a Severity Level IV violation is the failure to conduct operations according to administrative limits [redacted] established by NCS and provided on an NCS posting.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

[redacted]

[redacted]

[redacted]

If you have any questions concerning this report, please contact Natreon Jordan, of my staff, at (301) 415-7648.

Sincerely,

/RA/

Dennis Morey, Acting Chief
Technical Support Section
Special Projects Branch
Division of Fuel Cycle Safety
and Safeguards

Docket No. 70-27
License No. SNM-42

Enclosures: (1) Notice of Violation
(2) Inspection Report 70-27/2006-204

cc: L. Morrell
Licensing Officer
BWX Technologies

[redacted]

[redacted]

[redacted]

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Licensing Officer
BWX Technologies

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NOTICE OF VIOLATION

BWX Technologies, Inc.
Lynchburg, VA

Docket No. 70-27
License No. SNM-42

During a U.S. Nuclear Regulatory Commission (NRC) inspection from July 10 through 13, 2006, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

> Safety Condition No. S-1 of Special Nuclear Material License No. 42 requires that material be used in accordance with the statements, representations, and conditions in the license application dated July 14, 1995, and supplements thereto.
>
> Chapter 5.1.2 of the License Application states, in part, that activities at the site involving special nuclear material are conducted according to limits and controls established by Nuclear Criticality Safety (NCS). The administrative limits and controls are provided to the operating areas on nuclear criticality safety postings or in operating procedures or both.
>
> Contrary to the above, on and before July 13, 2006, the licensee failed to conduct operations according to administrative limits [redacted] established by NCS and provided on an NCS posting.

This is a Severity Level IV violation (Supplement VI)

Pursuant to the provisions of 10 CFR 2.201, BWX Technologies, Inc. (BWXT), is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with copies to the Chief, Technical Support Section, Division of Fuel Cycle Safety and Safeguards, NMSS, Regional Administrator, Region II, and the NRC resident inspector at BWXT, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other actions as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Enclosure 1

[redacted]

[redacted]

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

[redacted] In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 11th day of August 2006

[redacted]

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Docket No.:	70-27
License No.:	SNM-42
Report No.:	70-27/2006-204
Licensee:	BWX Technologies, Inc.
Location:	Lynchburg, VA
Inspection Dates:	July 10 - 13, 2006
Inspectors:	Dr. Christopher Tripp, Senior Criticality Safety Inspector Natreon Jordan, Criticality Safety Inspector Thomas Marenchin, Criticality Safety Inspector
Approved by:	Dennis Morey, Acting Chief Technical Support Section Special Projects Branch Division of Fuel Cycle Safety and Safeguards

Enclosure 2

[redacted]

EXECUTIVE SUMMARY

BWX Technologies, Inc.
NRC Inspection Report 70-27/2006-204

Introduction

Staff of the U.S. Nuclear Regulatory Commission (NRC) performed a routine and announced nuclear criticality safety (NCS) inspection of the BWX Technologies (BWXT), Lynchburg, Virginia, facility from July 10 through 13, 2006. The inspection included an on-site review of the licensee NCS program, inspections, audits, and investigations, and plant operations. The inspection focused on risk-significant [redacted] material processing activities including fuel fabrication and machining, the uranium recovery area, [redacted] process areas, and machining operations. The licensee programs were acceptably directed toward the protection of public health and safety and in compliance with NRC requirements.

Results

- A severity level IV violation was identified for the failure to conduct operations according to administrative limits [redacted] established by NCS and provided on an NCS posting.
- The licensee agreed to replace the [redacted] ventilation condensate [redacted] and revise operating procedures to clarify procedural requirements.
- The licensee agreed to perform explicit analysis of [redacted] accumulation in filter media.
- With the exception of the previously discussed analytical weakness, the NCS program as observed was adequate for maintaining acceptable levels of safety.
- The inspectors determined that the integrated safety analysis (ISA) accident sequences were adequate for maintaining acceptable levels of safety.
- NCS audits and corrective actions were adequate for maintaining acceptable levels of safety.
- Licensee identified NCS-related events and corrective actions were adequately tracked by the licensee.

[redacted]

REPORT DETAILS

1.0 Summary of Plant Status

BWXT manufactures high-enriched uranium fuel, [redacted] facility near Lynchburg, VA. During the inspection, the licensee conducted routine fuel manufacturing operations and maintenance activities in the fuel fabrication areas. Uranium recovery, downblending, and other routine operations and maintenance activities were conducted in the [redacted] area.

2.0 Nuclear Criticality Safety Program (88015)

a. Inspection Scope

The inspectors reviewed NCS analyses to determine that criticality safety of risk-significant operations was assured through engineered and human controls with adequate safety margin and preparation and review by qualified staff. The inspectors reviewed selected aspects of the following documents:

- NCS-2005-272, "[redacted]," dated December 9, 2005
- NCS-2006-081, "Nuclear Criticality Safety [redacted] dated April 11, 2006
- NCSE-02, Rev. 32, "Nuclear Criticality Safety Analysis & Quality Assurance Reviews," dated April 14, 2006
- NCS-1999-049, "Nuclear Criticality Safety [redacted]," dated March 13,1999
- NCS-2006-137, "Nuclear Criticality Safety [redacted]," dated June 22, 2006
- Nuclear Criticality Safety Analysis Supporting Revised Phase 2 of SER04-012 [redacted] dated June 3, 2005
- NCS-031006A, "[redacted]," dated March 10, 2006
- NCS-2002-017, "Nuclear Criticality Safety Analysis Supporting RWP02-009, [redacted]," dated January 15, 2002
- NCS-2005-272, "[redacted]," dated December 9, 2005

[redacted]

b. Observations and Findings

Within the selected aspects reviewed, the inspectors determined that NCS analyses were performed by qualified NCS engineers, that independent reviews of the evaluations were completed by qualified NCS engineers, that subcriticality of the systems and operations was assured through appropriate limits on controlled parameters, and that double contingency was assured for each credible accident sequence leading to inadvertent criticality. The inspectors determined that NCS analyses and supporting calculations demonstrated adequate identification and control of NCS hazards to assure operations within subcritical limits and that NCS controls for equipment and processes assured the safety of the operations.

The inspectors reviewed a [redacted] material accumulation in the pre-filter of a process glovebox enclosure. Inspectors reviewed several analyses to determine whether the safety basis for this event was adequate. Although the accumulation was higher than normal because of the nature of the process, the amount that accumulated in the pre-filter did not challenge the mass limit imposed on the enclosure. In addition, the inspectors were able to determine from NCS analyses that other credible scenarios that were more bounding had been shown to be safe. However, the analysis covering operations within the process area did not explicitly cover potential process upsets regarding accumulation of [redacted] material in the pre-filter. The licensee agreed that there needed to be an explicit analysis addressing accumulation in filter media. As a result of earlier conversations with the NRC resident inspector, the licensee had already committed to perform an explicit analysis and has since added this to its internal corrective action program. The licensee commitment to assess the process enclosure was being tracked as IFI 70-27/2006-203-01. As a result of the licensee's commitment to perform an explicit analysis covering accumulation in filter media, IFI 70-27/2006-203-01 is closed. The licensee's commitment to analyze [redacted] material accumulation in filter media will be tracked as **Inspection Follow-up Item (IFI) 70-27/2006-204-01**.

c. Conclusions

The licensee agreed to perform explicit analysis of [redacted] accumulation in filter media. With the exception of the previously discussed analytical weakness, the NCS program as observed was adequate for maintaining acceptable levels of safety.

3.0 Review of Integrated Safety Analysis and Items Relied On For Safety

a. Inspection Scope

The inspectors reviewed selected NCS-related items relied on for safety (IROFS) to determine that performance requirements have been met for selected accident sequences. During walkdowns, the inspectors evaluated the effectiveness of the IROFS to assure adequate subcritical margin for normal and credible abnormal conditions. The inspectors reviewed the facility integrated safety analysis (ISA) to determine that appropriate criticality safety accident sequences were identified and controlled

[redacted]

consistent with approved criticality safety analysis. The inspectors reviewed selected aspects of the following documents:

- Safety Analysis Report [SAR] 15.15, "[redacted]," Revision 87, dated December 21, 2005
- Safety Analysis Report 15.37, "[redacted]," Revision 56, dated October 31, 2005
- NCS-2005-239, "Evaluation [redacted]," dated January 16, 2006

b. Observations and Findings

The inspectors reviewed selected ISA accident sequences related to NCS and established that the accident sequences and controls corresponded with approved facility criticality safety analysis.

c. Conclusions

The inspectors determined that the ISA accident sequences were adequate for maintaining acceptable levels of safety.

4.0 Inspections, Audits, and Investigations (88015)

a. Inspection Scope

The inspectors reviewed results of the most recent NCS quarterly audits to assure that appropriate issues were identified and resolved. The inspectors reviewed selected aspects of the following document:

- NCS-2006-080, "NCS Violation & Observation Summary - 1st Quarter 2006," dated June 12, 2006

b. Observations and Findings

The inspectors observed that the licensee NCS audits were conducted in accordance with written procedures. The inspectors noted that the audits were performed by NCS engineers who reviewed open NCS issues from previous audits; reviewed the adequacy of control implementation; reviewed plant operations for compliance with license requirements, procedures, and postings; and examined equipment and operations to determine that past evaluations remained adequate. The inspectors had no concerns regarding the identification, assignment, and tracking of corrective actions. No safety concerns were noted.

c. Conclusions

NCS audits and corrective actions were adequate for maintaining acceptable levels of safety.

5.0 Nuclear Criticality Safety Event Review and Follow-Up

a. Inspection Scope

The inspectors reviewed the licensee response to five internally reported events. The inspectors reviewed the progress of investigations and interviewed licensee staff regarding immediate and long-term corrective actions. The inspectors reviewed selected aspects of the following documents:

- Corrective Action Database for 1st and 2nd Quarters 2006.

b. Observations and Findings

Five events were chosen to review in further detail:

- CA-2002640 NCS IROFS has been removed from service but was still listed in the SAR
- CA-2009341 [redacted] in non-designated storage area
- CA-2009020 Failed functional test of level alarm [redacted]
- CA-2005889 [redacted]
- CA-2002580 [redacted]

The inspectors noted that the licensee: (1) maintained a database of all corrective actions for events related to NCS; (2) was assigning corrective actions for all events identified; and (3) was performing trending analysis to identify recurrence of similar events. The inspectors determined that the licensee was taking appropriate actions to identify and track event-related corrective actions.

c. Conclusions

Licensee identified NCS-related events and corrective actions were adequately tracked by the licensee.

6.0 Plant Operations (88015)

a. Inspection Scope

The inspectors performed plant walkdowns to review activities in progress and to determine whether risk-significant [redacted] material operations were being conducted safely and in accordance with regulatory requirements. The inspectors verified the adequacy of management measures for assuring the continued availability, reliability, and capability of safety-significant controls relied upon by the licensee for controlling criticality risks to acceptable levels. The inspectors performed walkdowns of fuel fabrication and machining, [redacted], downblending process areas, uranium recovery area, [redacted] process areas to determine that facility operations were being conducted safely and in accordance with NRC

requirements. As part of this review, the inspectors interviewed plant personnel, reviewed system drawings, procedures, and NCS Analyses (NCSAs), and observed operations in progress. The inspectors reviewed selected aspects of the following documents prior to performing the walkdowns:

- NCS-2005-272, "[redacted]," dated December 9, 2005
- NCS-2006-081, "Nuclear Criticality Safety [redacted]," dated April 11, 2006
- NCSE-02, Rev. 32, "Nuclear Criticality Safety Analysis & Quality Assurance Reviews," dated April 14, 2006
- NCS-1999-049, "Nuclear Criticality Safety [redacted]," dated March 13, 1999
- NCS-2006-137, "Nuclear Criticality Safety [redacted]," dated June 22, 2006
- Nuclear Criticality Safety Analysis Supporting Revised Phase 2 of SER04-012 [redacted] dated June 3, 2005
- NCS-031006A, "[redacted]," dated March 10, 2006
- NCS-2002-017, "Nuclear Criticality Safety Analysis Supporting RWP02-009, [redacted] dated January 15, 2002
- NCS-2005-272, "[redacted]," dated December 9, 2005
- OP-0061150, "Inspection and Cleaning of Recovery Ducts," Rev. 18.
- OP-0061101, "[redacted]," Rev. 38.
- OP-0061143, "[redacted]"
- NCS-2006-056, "Nuclear Criticality Safety Analysis Supporting CR-1022432 and CR-1020834," dated March 14, 2006
- NCS-1996-165, "[redacted]," dated July 28, 1996

b. Observations and Findings

The inspectors verified that controls identified in NCS analyses were installed or implemented and were adequate to ensure safety. The cognizant NCS engineers were knowledgeable and had good interfaces with operators on the process floors. With the exception of the violation discussed below, no safety issues were identified during the walkdowns.

[redacted]

During a walkdown of the areas, the inspectors identified [redacted] material, of a form not authorized for storage within that area per the nuclear criticality safety posting, being stored on a shelf with other approved [redacted] material.

[redacted]

Chapter 5.1.2 of the License Application states, in part, that activities at the site involving special nuclear material are conducted according to limits and controls established by NCS. The administrative limits and controls are provided to the operating areas on NCS postings or in operating procedures or both.

Contrary to the above, on and before July 13, 2006, the licensee failed to conduct operations according to administrative limits [redacted] established by NCS and provided on an NCS posting. Failure to conduct operations according to administrative limits [redacted] outlined in the nuclear criticality safety posting is **Violation (VIO) 70-27/2006-204-02**.

[redacted] area

The inspectors reviewed ventilation ductwork connected to the [redacted] process including a [redacted] to the scrubber system. [redacted] junction ascending to the scrubber system, the ductwork has a low point which has drains to prevent accumulation of condensate from the process; the drains consist of [redacted] that drain to the [redacted]. Operators are required to check the [redacted] daily for the presence of condensate, which indicates that [redacted] are clear. The inspectors observed that the [redacted] was so discolored that it was not possible to see the presence of liquid inside it. In addition, plant personnel indicated that they could not see inside the [redacted] and had to drain the contents of the [redacted] to verify that the drains were open. The inspectors therefore examined the applicable operating procedures to determine if this practice was in accordance with approved procedures.

The inspectors noted that operating procedure OP-0061150, Section Q, requires in Step 17.1, "Inspect daily for liquid." Operating Procedure OP-0061101, Section M, however, requires in Step 13.1 "[redacted]." Because it did not appear possible for the operators to tell when the [redacted] was half-full, the inspectors examined several daily records from the previous campaign. In most cases, between [redacted] was drained from the [redacted], usually once but sometimes more than once per day, but in one case, [redacted] was drained from the [redacted]. The capacity of the [redacted]. When asked, the licensee stated that the container used to drain the [redacted] and is not graduated to permit more accurate measurement of the volume. Thus, the [redacted] volume is only an approximation. Moreover, the licensee stated that the requirement to drain the [redacted] when it is half-full is not a criticality safety requirement.

The inspectors determined that the condition of the [redacted] rendered observation of the level (or even presence) of the condensate impossible, and therefore the licensee could not comply with the requirement to "inspect" [redacted], or drain [redacted] when half-full. The inspectors determined, however, that the applicable NCSA, NCS-2006-056, stated (Requirement 9) that "The [redacted] duct drain and [redacted] duct drain shall be inspected each operating day to determine that they remain free-flowing." The licensee stated that the nature of this "inspection" was not specified, and that the intent of this requirement was met by daily draining of the [redacted]. The licensee had

[redacted]

evaluated the ventilation ductwork assuming any material present was fully moderated and reflected, so that even if the [redacted] filled completely and backed up into the ductwork, the system would be bounded by the criticality analysis. A filled [redacted] will not cause solution to back up into the scrubber system, because the ventilation system operates with only [redacted] and the scrubber is at a significantly higher elevation than the header. Because the requirement to "inspect" the [redacted] is ambiguous, and because the requirement to drain the [redacted] when it is half-full is not tied to NCS, the inability to follow the procedures does not challenge the criticality safety basis for the system.

During the exit meeting, the licensee stated that it would revise the affected procedures to clarify the requirements relied on for NCS, including clearly defining what is meant by an "inspection" of the [redacted] drain and removing the requirement to drain the [redacted] when it is half full. In addition, the licensee will replace the [redacted] with one that clearly allows operators to view the level of condensate. Completion of the corrective actions to revise the procedure and replace the [redacted] will be tracked as **IFI 70-27/2006-204-03**.

c. Conclusions

A severity level IV violation was identified for the failure to conduct operations according to administrative limits [redacted] established by NCS and provided on an NCS posting.

The licensee agreed to replace the [redacted] ventilation condensate [redacted] and revise operating procedures to clarify procedural requirements.

7.0 Open Item Review

IFI 70-27/2005-202-03

This item tracks the licensee's actions to review validation cases that were poorly described in facility documentation, and determine and analyze, if possible, the associated experimental uncertainties. To do this, the inspectors examined report NCS-2006-046, "Completion of IFI 70/27-2005-202-03: N–1000 Number 20319 Review of Poorly Described Cases and Updating Uncertainties." This report stated that, in order to close the IFI, the licensee: (1) reviewed Benchmark Notebook validation cases to note any that were insufficiently described and any duplicate cases, (2) determined the experimental uncertainties for the retained benchmarks, and (3) evaluated the effect of any changes to the validation database on the established bias. During its review of the validation cases, the licensee determined that several cases should be removed due to lack of documented pedigree or duplication. The licensee summarized the results in a table in this document. Of the [redacted] in the table: [redacted] were found acceptable; [redacted] did not have documented uncertainties, but were found similar to experiments in the International Handbook of the International Criticality Safety Benchmark Evaluation Project (ICSBEP); [redacted] did not have documented uncertainties, but were found similar to ICSBEP experiments except for the inclusion of some unique materials not included in the ICSBEP experiments; and [redacted] were deleted. The inspectors reviewed examples in each of these categories, and determined that, for those experiments that were similar

to ICSBEP experiments, the licensee's estimate of the uncertainty was consistent with or conservative compared to the ICSBEP uncertainties. For cases that involved unique materials, such as [redacted] the licensee added the uncertainty from the otherwise similar ICSBEP experiment to an estimated uncertainty for the unique material. For all cases examined in which the experimental uncertainties were estimated, the inspectors determined that the estimates were reasonable and conservative. Among the acceptable cases were instances in which the licensee directly contacted the experimenters in order to ensure that the uncertainties used were reasonable.

Among the [redacted] experimental cases deleted, the breakdown was as follows: [redacted] had known errors in the experimental description [redacted] were duplicates of other cases in the database, and [redacted] had references that were either wrong, unavailable, or otherwise unacceptable. The licensee determined on the basis of this review that the overall bias did not change, and so the existing validation was bounding. However, because of the changes, NCS-2006-055, "Validation Report for [redacted]," was updated. The inspectors determined that the licensee had established appropriate uncertainties for those experiments for which uncertainties could be determined, deleted those for which the uncertainties could not be determined, and correctly evaluated the resulting bias. This item is closed.

IFI 70-27/2005-202-04

This item tracks the licensee's efforts to examine individual subsets of benchmark experiments to determine if there were any localized bias trends that could result in a negative bias larger than that for the overall set of benchmarks. To do this, the inspectors examined report NCS-2005-249, "[redacted]." [redacted] The licensee performed a similar analysis for the low-enriched uranium (LEU) and high-enriched uranium (HEU) benchmarks separately, determining trends as a function of [redacted] and ECALCF. [redacted]

[redacted]

[redacted]

[redacted] In the other cases, the reason for the under-prediction was not determined, but the inspectors noted that none of these were very applicable to facility calculations. Therefore, this is not a concern.

The inspectors determined that the licensee had done a thorough analysis of the bias trends for a large number of experimental subsets, had utilized appropriate statistical techniques in analyzing them, and had determined the adequacy of the overall validation effort. This item is closed.

IFI 70-27/2006-203-01

This item tracks the licensee's assessment of the process enclosure event involving accumulation of [redacted] material in the pre-filter, and the licensee's analytical basis for ensuring process safety. After operating using a new method for one part of the [redacted] process, the licensee identified an above normal amount of [redacted] material accumulation in the enclosure pre-filter. Inspectors interviewed NCS staff and operations staff while walking down the process in which the event took place. The licensee was able to provide an adequate safety basis through a series of referenced NCS analyses. The inspectors concluded that although the accumulation was higher than normal because of the nature of the process, the amount that accumulated in the pre-filter did not challenge the mass limit imposed on the enclosure. In addition, the inspectors were able to determine from NCS analyses that other credible scenarios that

[redacted]

were more bounding had been shown to be safe. The inspectors noted that the analysis covering operations within the process area did not explicitly cover potential process upsets regarding accumulation of [redacted] material in the pre-filter.

The licensee agreed that an explicit analysis addressing accumulation in filters was appropriate and committed to perform an explicit analysis. The inspectors noted that the licensee commitment had been added to the licensee internal corrective action program. IFI 70-27/ 2006-204-01 tracks the new analysis. Therefore, the inspectors determined that the licensee had completed the process enclosure assessment. This item is closed.

8.0 Exit Meeting

The inspectors presented the inspection scope and results to members of the licensee's management and staff during an exit meeting on July 13, 2006. The licensee acknowledged and understood the findings as presented.

[redacted]

SUPPLEMENTARY INFORMATION

1.0 List of Items Opened, Closed, and Discussed

Opened

IFI 70-27/2006-204-01	Tracks the licensee's commitment to analyze [redacted] material accumulation in filter media.
VIO 70-27/2006-204-02	Failure to conduct operations according to administrative limits [redacted] outlined in the nuclear criticality safety posting.
IFI 70-27/2006-204-03	Tracks the licensee's commitment to replace the [redacted] ventilation condensate [redacted] and revise operating procedures.

Closed

IFI 70-27/2005-202-03	Tracks the licensee's review of poorly described validation cases; determining and analyzing experimental uncertainties.
IFI 70-27/2005-202-04	Tracks the licensee's review of individual subsets of data to determine localized bias trends (including reason for low k_{eff} values).
IFI 70-27/2006-203-01	Tracks the licensee's assessment of the process enclosure event involving accumulation of [redacted] material in the pre-filter, and the licensee's analytical basis for ensuring process safety.

Discussed

None

Attachment

[redacted]

[redacted]

2.0 Inspection Procedures Used

IP 88015	Headquarters Nuclear Criticality Safety Program

3.0 Partial List of Persons Contacted

BWXT

R. Hogg	Manager, Nuclear Criticality Safety
J. Dougherty	Licensing
D. Spangler	Manager, Radiation Protection
T. Nicks	Manager, Security
C. Reed	Manager, Production Control
D. Ward	Manager, Environment, Safety, Health, and Safeguards
W. Nash	General Manager
R. Cochran	Manager, Operations

NRC

C. Tripp	Sr. Criticality Safety Inspector, NRC HQ
N. Jordan	Criticality Safety Inspector, NRC HQ
T. Marenchin	Criticality Safety Inspector, NRC HQ
G. Wertz	Senior Resident Inspector, NRC Region II

4.0 List of Acronyms

BWXT	BWX Technologies, Inc.
CFR	Code of Federal Regulation
[redacted]	[redacted]
ECALCF	energy corresponding to the average lethargy causing fission
HEU	high-enriched uranium
[redacted]	[redacted]
[redacted]	[redacted]
IFI	inspection follow-up item
ICSBEP	International Criticality Safety Benchmark Evaluation Project
IP	inspection procedure
IROFS	items relied on for safety
ISA	integrated safety analysis
k_{eff}	effective neutron multiplication factor
LEU	low-enriched uranium
[redacted]	[redacted]
NCS	nuclear criticality safety
NCSA	nuclear criticality safety analyses
NCSE	nuclear criticality safety evaluation
NRC	U.S. Nuclear Regulatory Commission
[redacted]	[redacted]
SAR	safety analysis report

[redacted]

[redacted]

SFF	Specialty Fuels Facility
SNM	special nuclear material
[redacted]	[redacted]
USL	upper safety limit
VIO	violation

[redacted]